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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,608	02/26/2002	Norio Koma	349	4219

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EXAMINER

WANG, GEORGE Y

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,608

Applicant(s)

KOMA, NORIO

Examiner

George Y. Wang

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/162,984.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Claims 14-16 in Response filed October 27, 2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on October 7, 2002 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

3. The abstract of the disclosure is objected to because it is too long. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. Correction is required. See MPEP § 608.01(b).

Claim Objections

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4. Claim 14 is objected to because the recitation "and/or" fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Appropriate correction is required.

Note: For the purposes of examination, Examiner will read the limitation as "or."

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koma (U.S. Patent No. 5,608,556) in view of Yamada et al. (U.S. Patent No. 5,880,797, from hereinafter "Yamada").

7. As to claim 14, Koma discloses a vertically aligned liquid crystal display (fig. 4) comprising a vertically aligned liquid crystal layer (fig. 4, ref. 41) disposed between a plurality of pixel electrodes (fig. 4, ref. 31) and a common electrode (fig. 4, ref. 32), where the orientation of the liquid crystal is controlled by an electric field (fig. 5, ref. 42), the common electrode comprises a plurality of orientation controllers (fig. 4, ref. 33a) formed in areas corresponding to each of the plurality of pixel electrodes,

However, the reference fails to specifically disclose each of a plurality of the pixel electrodes divided by one or more slits or projections into two or more electrode regions, which are electrically connected and arranged in parallel with each other, and each of the orientation controllers associated with a corresponding pixel electrode and having portions extending along the direction in which one or more slits or projections extend where one of the orientation controllers is disposed between the two slits.

Yamada discloses each of a plurality of the pixel electrodes (fig. 3, ref. 201) divided by one or more slits or projections (fig. 3, ref. 20) into two or more electrode regions, which are electrically connected and arranged in parallel with each other, and each of the orientation controllers associated with a corresponding pixel electrode and having portions extending along the direction in which one or more slits or projections extend where one of the orientation controllers (col. 7, ref. 42-53) is disposed between the two slits.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have each of a plurality of the pixel electrodes divided by one or more slits or projections into two or more electrode regions, which are electrically connected and arranged in parallel with each other, and each of the orientation controllers associated with a corresponding pixel electrode and having portions extending along the direction in which one or more slits or projections extend where one of the orientation controllers is disposed between the two slits since one would be motivated to better control the axial-symmetric orientation axis (col. 4, lines 31-39) for improved excellent display characteristic with no display roughness (col. 7, lines 47-53).

Furthermore, a display with enhanced viewing angle characteristic and transmittance is provided with a reduced number of production steps (col. 4, lines 59-67).

8. Regarding claims 15-16, Koma discloses the vertically aligned LCD as recited above, however, the reference fails to specifically disclose orientation controllers with sloped projections extending along the longer edge of the electrode region and branching at both longitudinal ends of a corresponding one of the electrode regions toward the corner section of the electrode.

Yamada discloses orientation controllers with sloped projections extending along the longer edge of the electrode region and branching at both longitudinal ends of a corresponding one of the electrode regions toward the corner section of the electrode.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have orientation controllers with sloped projections extending along the longer edge of the electrode region (fig. 4a) and branching at both longitudinal ends of a corresponding one of the electrode regions toward the corner section of the electrode (fig. 4b) since one would be motivated to better control the axial-symmetric orientation axis (col. 4, lines 31-39) for improved excellent display characteristic with no display roughness (col. 7, lines 47-53). Furthermore, a display with enhanced viewing angle characteristic and transmittance is provided with a reduced number of production steps (col. 4, lines 59-67).

Conclusion

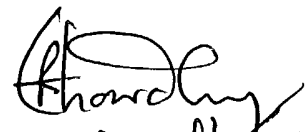
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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 703-305-7242. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

gw
December 8, 2003


T. Choudhury
Primary Examiner